

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (currently amended) A screening assay for the identification of a specific small organic molecule which acts as an antimicrobial by inhibiting or uncoupling enzyme I comprising:

a) adding a test small organic molecule compound to a reaction mixture containing enzyme I and phosphoenolpyruvate; and

b) measuring pyruvate levels in the presence of lactate dehydrogenase and NADH, where increased levels of pyruvate serve as an indication that the test small organic molecule compound has uncoupling or inhibitory activity of enzyme I of the bacterial phosphotransferase system.

2. (currently amended) A screening assay for the identification of a specific small organic molecule which acts as an antimicrobial antimicrobials by inhibiting or uncoupling enzyme I comprising:

a) adding a test small organic molecule compound to a reaction mixture containing enzyme I and phosphoenolpyruvate and a radiolabeled N-acetylglucosamine terminal phosphate acceptor or radiolabeled glucose terminal phosphate acceptor;

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b) isolating the radiolabeled terminal phosphate acceptor and measuring the level of phosphorylation of the phosphate acceptor, where decreased levels of phosphorylation serve as an indication that the test small organic molecule compound has uncoupling or inhibitory activity on enzyme I of the bacterial phosphotransferase system.

3. (currently amended) The assay of Claim 2 where the radiolabeled terminal phosphate acceptor is N-acetyl glucosamine.

4. (currently amended) The assay of Claim 2 where the radiolabeled terminal phosphate acceptor is glucose.

5. (currently amended) The assay of Claim 1 or 2 wherein the test small organic molecule is synthesized from a combinatorial library.

6. (currently amended) The assay of Claim 1 or 2 wherein the test small organic molecule has a molecular weight under 1,500.
